

## **NTS Objection to Berwick Bank Offshore Windfarm**

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### **1. Summary**

The National Trust for Scotland (the Trust) cares for St Abb's Head National Nature Reserve (NNR), which will be directly impacted by Berwick Bank Offshore Windfarm. The Trust has a duty to care for, share and speak up for Scotland's magnificent heritage. This not only involves the sites we care for but also Scotland's amazing coastlines, seas, marine life, seabirds and communities.

The Trust welcomes the ambition behind Berwick Bank Offshore Windfarm, however we object to the proposed location. We believe the current proposal will have significant detrimental, long term and potentially irreversible impacts on Scotland's natural and cultural heritage, including our critical seabird colonies, other species and habitats in designated sites, landscape, coastal character and coastal communities. We also contest the projected outcomes of the compensation measures as they fall far short of mitigating these impacts, let alone offering additionality.

We believe that other locations such as deep-water sites further out to sea would be more appropriate and that the application should be rejected by Marine Scotland. SSE-R should be directed to scope out other locations where development will have a lesser impact and proportionate and achievable compensation that offers true additionality can be realised. This objection is supported by the National Trust for England, Wales and Northern Ireland.

## 2. Geographical context

SSE-R has submitted an application to Marine Scotland for the construction of a 4GW offshore windfarm at Berwick Bank, in the Firth of Forth. The site is situated about 33km from St Abb's Head NNR.

The proposed site sits on the Firth of Forth Banks Marine Protected Area (MPA) which is designated for its species, habitats and geomorphological features. It is also situated on top of the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area (SPA), which is designated for the protection of 21 seabird and waterbird species.

St Abb's Head NNR has internationally important seabird colonies. The cliffs are populated by about 45,000 seabirds during the breeding season which includes internationally important numbers of guillemots (approximately 3% of the British breeding population) and nationally important numbers of kittiwakes, razorbills and shags. Due to this St Abb's Head is a popular birdwatching site. Our seabird population monitoring means we hold a dataset spanning more than 30 years. This dataset is of significant value as very few other sites in the UK have such a long time series.

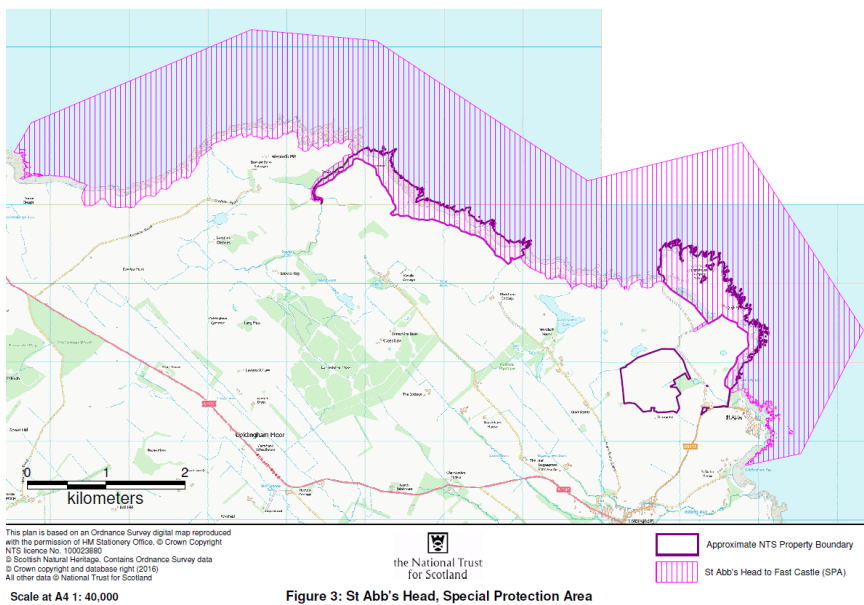


Fig 1. St Abb's Head NNR property boundary and SPA boundary

St Abb's Head is contained within the Berwickshire Coast Special Landscape Area (SLA) because of the dramatic, wild and unspoilt nature of the landscape. St Abb's Head Property Statement states that the landscape value is based on its 'seascapes and panoramic views' and there 'is a strong natural feel to the place and the lack of built structures helps to strengthen the feeling of wildness. Visitors... are afforded the opportunity to marvel not only at the wildlife of the area, such as passing cetaceans, and

seabirds either nesting, in flight or on the sea, but also to appreciate the fishing and other maritime activities taking place in the vicinity right before their eyes.”<sup>1</sup>

### **3. The Trust’s Policy Position on Renewable Energy**

The Trust supports well-designed renewable energy developments of the right type and scale in appropriate locations. The development of offshore wind is vital to increasing Scotland’s renewable energy generation capacity to meet the Scottish Government’s targets of net zero by 2045 and the Trust supports offshore wind, as it does onshore wind, of the right scale, in the right location.

Offshore windfarms should not be located where they are projected to have significant negative impacts on natural and cultural heritage (particularly those elements designated of international or national importance within designated areas such as Special Protection Areas, Special Landscape Areas and Marine Protected Areas) unless:

- (a) mitigation is proposed that will reduce impact to an acceptable level; or
- (b) compensation measures are proposed that will produce net positive, additional outcomes that adequately compensate for the impacts.

### **4. The Trust’s Objection to Berwick Bank Offshore Windfarm**

The Trust objects to the proposed development both due to the negative impacts on the special qualities of St Abb’s Head NNR, and because of the negative impacts it will have on Scotland’s natural and cultural heritage which will be felt much more widely.

The Trust objects to the Berwick Bank Offshore Windfarm as we:

- contest the ability of contest the validity of the methods of gathering and interpreting scientific data and the accuracy of seabird mortality figures;
- disagree with the projected impacts and associated projected scale relating to seabirds, landscape, fisheries, species and habitats and designations;
- disagree that the proposed compensation measures are effective and additional; and
- believe that approval of the application would result in Marine Scotland being in contravention of the 1994 Habitats Regulations and 2010 Marine Scotland Act.

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<sup>1</sup> St Abbs Head Property Statement 2016

#### 4.1 Legal basis for objection

The Trust believes Marine Scotland are unable to approve the application without contravening Regulation 48 (5) of the Conservation (Natural Habitats, &c.) Regulations 1994. This states:

*In the light of the conclusions of the assessment, and subject to regulation 49, the authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site.*

Regulation 49 (1-2) states:

*If they are satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), the competent authority may agree to the plan or project notwithstanding a negative assessment of the implications for the site.*

*(2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either–*

*(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment, or*

*(b) other reasons which in the opinion of the European Commission are imperative reasons of overriding public interest.*

The Trust argues that scale of impact means that under Regulation 48, the application cannot be approved as it will adversely affect the integrity of several SPAs including St Abb's Head to Fast Castle SPA, which supports up to almost 80,000 individual seabirds, including nationally important numbers of Razorbill, Common Guillemot, Kittiwake, Herring Gull and Shag, as well as the Outer Firth of Forth and St Andrews Bay Complex SPA, which is designated for the protection of 21 seabird and waterbird species. It may also affect the integrity of the Firth of Forth Banks MPA which is designated for its species, habitats and geomorphological features.

The Trust also argues that, with reference to Regulation 49, there *are* alternative sites for location of the windfarm where impacts would be lesser (i.e. SCOTWIND sites designated for offshore windfarms).

The Marine Scotland Act 2010 (sections 82 and 83) outlines the duties of public bodies to MPAs. Once an MPA is designated, there is a duty on public authorities to carry out their functions to further the conservation objectives of the site. The authority must not allow any activity they are responsible for authorising unless they are satisfied that there is no significant risk of hindering the achievement of the conservation objectives. Alternatively, they must be satisfied that the benefit to the public outweighs the risk of damage to the environment, there are no alternatives which would lower the risk, and that steps will be taken to compensate for any damage.

The MPA assessment found potential impacts include: increased suspended sediment concentrations and associated deposition, temporary habitat disturbance, long term habitat loss, introduction and spread of invasive non-native species, colonisation of new habitat, and alteration of seabed habitat. Due to the breadth and scale of these impacts, the Trust is concerned that the impact on the conservation objectives of the MPA will not be minor and that by approving the proposed development Marine Scotland may not be fulfilling its duties as set out in the Marine Scotland Act 2010.

#### **4.2 St Abb's Head- impacts on visitor experience and designated qualities**

St Abb's Head NNR receives about 50,000 visitors per year. The Trust argues that the impact on the visitor experience, their contribution to the local economy and the designated qualities St Abb's Head has not been adequately assessed. We also believe that the special qualities for which St Abb's Head is designated would be compromised by the addition of further infrastructure to the seascape.

The intertidal portion of the St Abb's Head area of the property forms part of the St Abbs and Eyemouth Voluntary Marine Reserve (VMR). The VMR was the first marine protected area in Scotland and is a nationally important scuba diving site, owing to the clarity of the water and abundance of marine life. St Abb's Head also supports commercial marine tourism, with people coming to experience the marine environment as well as the dramatic cliff and seabird colonies.

St Abb's Head is a renowned bird watching sites and a large part of its value comes from the continued protection of a wild place where nature thrives. St Abb's Head is one of just 43 NNRs in Scotland and its natural heritage must be protected for current and future generations. Moreover, St Abb's Head supports the local economy through providing a location for commercial enterprises and drawing tourism to the area. The impacts of the proposed development on these benefits have not been assessed and we argue that without this assessment a fully informed decision on the application cannot take place.

The Trust also believes that not enough attention has been given to how the development will impact the designations at St Abb's Head. Notified features of the St Abb's Head to Fast Castle Site of Scientific Interest (SSSI) include the geology of the maritime cliffs and seabirds that breed there, particularly guillemot and kittiwake. The igneous mass of St Abb's Head forms a spectacular rugged coastline with numerous clefts, gullies, geos, caves, stacks, reefs and skerries. Of principal geomorphological importance is the clear relationship displayed between lithology, structure and coastal form. The Trust is concerned that the visual impact proposed development may detract from the value of St Abb's Head's geological features. These values should not be underestimated as they play a key role in people connecting with the natural world and with the heritage of the landscape.

St Abb's Head NNR also sits in the St Abb's Head to Fast Castle SPA. We believe that the conservation objectives set out under the designation would be compromised by the proposed development,

specifically for kittiwake and the wider seabird assemblage. We also believe that the landscape value identified in the Berwickshire Coast SLA would be compromised. The impacts on these designations are discussed further in 4.2 and 4.3.

### 4.3 Seabird Impacts

Seabirds are currently facing extreme pressure from factors such as reduced food availability and invasive predators. On top of this is a new challenge, in the form of the unprecedented deaths caused by highly pathogenic avian influenza (HPAI). The index of seabird populations in Scotland showed that even before HPAI, Scotland had lost 38% of its breeding seabirds since the index began in 1986. Of the 37 seabird species assessed in the UK, 29 are listed as 'red' or 'amber' in the traffic light of conservation threat status<sup>2</sup>. Scotland's seabirds are already under immense pressure and it is imperative that additional pressures that cannot be mitigated or compensated against are not allowed.

The Trust is concerned that the conservation objectives set out under the designation of the St Abb's Head to Fast Castle SPA would be compromised by this development therefore, under the Habitats Regulations, the application must be rejected.

To fulfil the conservation objectives of the SPA (to avoid deterioration of the habitats of, or significant disturbance to, the qualifying species of Common Guillemot, Herring gull, Kittiwake, Razorbill, European Shag and the wider Seabird assemblage) we are required to:

- Maintain the population of the species as a viable component of the site;
- Maintain the distribution of the species within site;
- Maintain the distribution and extent of habitats supporting the species;
- Maintain the structure, function and supporting processes of habitats supporting the species; and
- Prevent any significant disturbance of the species.

However, the impact assessment carried out to predict the magnitude of harm caused by the proposed 307 turbines to internationally and nationally protected seabird colonies shows that at St Abb's Head NNR 371 kittiwakes, 576 guillemots and 14 razorbills are expected to die **per year** for 20-35 years (the expected operational lifetime of a windfarm). This predicted magnitude of harm fundamentally undermines the management requirements of the SPA, as outlined above.

Moreover, the impact from the proposed development is significantly, higher than comparable sites. In total across all SPAs where predictions were made, and across 20 years, 40,606 puffins, kittiwakes, guillemots and razorbills are predicted to be removed from the population. This mortality is particularly high when compared to other offshore windfarms. For example, the Hornsea three development was predicted to kill 73 kittiwakes per year whilst generating a maximum of 2.85 GW power (26 kittiwakes

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<sup>2</sup> [https://britishbirds.co.uk/sites/default/files/BB\\_Dec21-BoCC5-IUCN2.pdf](https://britishbirds.co.uk/sites/default/files/BB_Dec21-BoCC5-IUCN2.pdf)

per GW power). The proposed development is expected to kill 699 kittiwakes per year for a maximum generation of 4.1 GW power (171 kittiwakes per GW power). The impacts of Hornsea three, whilst much lower, were considered to be high and triggered their own derogation case. In addition, the cumulative impact of existing and already consented windfarms is considered to be very high, without the extra mortality predicted by the proposed development.

We also believe that the proposed development will have a significantly detrimental impact on the Farne Islands SPA, owned and managed by the National Trust in England. The Farne Islands are home to internationally important, protected colonies of terns (common, Arctic, roseate and Sandwich), guillemots, puffins and kittiwakes. The proposed development states that the estimated annual mortality for kittiwakes from the Farne Islands alone is 35 kittiwakes, 168 guillemots, and 21 puffins. Over an expected lifetime of the windfarm of 20-35 year this would remove over 7,500 seabirds from the Farnes Islands, which is incompatible with the SPA conservation objectives. As discussed in later sections we disagree the proposed compensation can mitigate this impact. We also note the severity of impact of the proposed development must be looked at in the context of HPAI, which hit the Farne Islands particularly badly and the cumulative impact of the other existing or planned offshore wind developments are already a concern for Farne Islands seabirds.

The Trust also has strong concerns over the approach used to identify impacts on seabirds. SSE-R states in the application that *“using the Scoping Approach, the RIAA concludes that an adverse effect on integrity (AEOI) cannot be excluded at eight SPAs – Buchan Ness to Collieston Coast, East Caithness Cliffs, Farne Islands, Flamborough and Filey Coast, Forth Islands, Fowlsheugh and St Abb’s to Fast Castle. Four species are affected – Kittiwake, Guillemot, Puffin and Razorbill.”* We reject the introduction of a ‘developer approach’ which appears to ‘cherry-pick’ lower projected impacts than the best available guidelines (though even using these low estimates the windfarm still impacts five SPAs and one red-listed species).

#### **4.4 Landscape**

Figure 2 shows the landscape impact of Berwick Bank Offshore Windfarm, as well as three other windfarms, demonstrating the cumulative impact of the proposed development. Seagreen Alpha and Seagreen Bravo will sit behind Berwick Bank, only the tips of which are visible. Neart na Gaoithe and Inchcape are both visible from shore but are less visible and smaller than the proposed development.

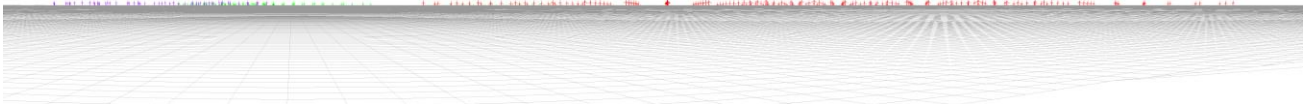


Fig 2. View from St Abb's Head (Berwick Bank Offshore Windfarm in red)

The Trust disagrees with the assessment of the impact of cumulative development on the seascape. Table 15.52, Ch 15 identifies the cumulative daytime effects of the operation and maintenance of the offshore elements of the proposed development on views as *“not significant (no additional effect)”*. However although Neart na Gaoithe and Inchcape are both visible from shore they are much less visible than the proposed development and are concentrated in a significantly smaller area, meaning the visual impact of Neart na Geoithe alone is drastically less than the visual impact of both Neart na Geoithe and the proposed development.

The impact of the cumulative development will result in changing the very character of the area from a flat seascape to a windfarm landscape. As stated in NatureScot's 2017 Visual Representation of Wind Farms Guidance *“As multiple wind farms are built they are more likely to ‘compete’ with the landscape’s original foci ... they will appear as a dominant characteristic of the area, seeming to define the character type as a ‘wind farm landscape character area’<sup>3</sup>”*.

Table 15.51, Ch 15 of Environmental Impact Assessment Report - Volume 2, SSE-R identifies the daytime effects of the operation and maintenance of the offshore elements of the proposed development on views from St Abb's Head to be *“significant (major/moderate)”*. Given the conclusion that the impact will be significant, the Trust is concerned that SSE-R has not proposed any mitigation or compensation.

SSE-R provides three reasons for the lack of compensation or mitigation, despite the significance of impact. The Trust disagrees with the rationale behind this decision. The reasons given are that Neart na Gaoithe turbines will be visible as well as the proposed development; the turbines will have a 'natural' feel as their movements will be synchronised with the wind and waves; and because the proposed development will only affect views out to sea not the character of the coastline.

Firstly, as seen in viewpoint 15, appendix 14.1, Neart na Gaoithe is not nearly as visible as the proposed development as it is much smaller, meaning the visual impact of Neart na Geoithe alone is drastically

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<sup>3</sup> <https://www.nature.scot/doc/visual-representation-wind-farms-guidance>



less than the cumulative visual impact. Secondly, the movements of the turbines are not what an assessment of landscape impact should be based on according to NatureScot guidance.

Lastly, although the proposed development is physically removed from the coastline, St Abb's Head NNR and the Berwickshire Coast SLA are designated because of their sense of place, wildness, exposed character, degree of remoteness resulting from its the elevated coastline and wide views out to sea<sup>4</sup>. The SLA designation also cites large colonies of seabirds, the open seascape, the naturalness and 'elemental' feel of the marine environment and the aesthetic appeal of "*sea birds bobbing on the waves, small fishing boats heading round the island and the gulls wheeling overhead*"<sup>5</sup>. The seascape changes the proposed development will bring will have a direct and severe impact on these special qualities.

The Trust believes other sites that would suffer less adverse impacts would be more appropriate for the proposed development. We strongly believe offshore windfarm sites should be situated where they will have a lesser impact on designated landscape and other special qualities of designated areas. We also believe that developments should align with NatureScot's guidance on windfarm siting (e.g. "*Simple, open, less settled, flat coastal areas*")<sup>6</sup>.

#### **4.5 Coastal communities and low impact fisheries**

Many of those living in our coastal communities rely on the marine environment for their livelihoods, whether through fishing, tourism or maritime activities. This is particularly true around St Abb's Head and the East Lothian coastline, where the marine environment provides opportunities for tourism businesses such as diving and boat tours, as well as has a strong low impact fisheries heritage and industry. The majority of Dunbar's fleet is creelers. The application does not adequately consider how the proposed development may affect these communities.

The Trust welcomes the commitment to provide appropriate mitigation where the relocation of static fishing gear is necessary during the construction period but the application needs define what is meant by "*appropriate mitigation*".

The environmental impact assessment report volume 2, Ch 12: commercial fisheries states:

*"Existing legislation does not prevent fishing from occurring within operational wind farm array areas and it is expected that fishing activities will be able to resume to a certain degree in the Proposed Development array area. The level of activity which may resume in the Proposed Development array*

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<sup>4</sup> At Abb's Head NNR Property Statement, NTS, 2016

<sup>5</sup> [https://eastlothianconsultations.co.uk/housing-environment/ldp-special-landscape-areas/supporting\\_documents/Special%20landscape%20Areas%20SPG%20Part%20P.71276.pdf](https://eastlothianconsultations.co.uk/housing-environment/ldp-special-landscape-areas/supporting_documents/Special%20landscape%20Areas%20SPG%20Part%20P.71276.pdf)

<sup>6</sup> <https://www.nature.scot/doc/visual-representation-wind-farms-guidance>

*area, however, would depend on the perception of individual skippers with regard to risks associated with operating fishing gear within the Proposed Development array area at a given time.”*

The Trust is concerned that the application confuses the lack of legislation to prevent fishing within operational offshore windfarms with meaning that fishing is safe and permissible in them. The application should provide analysis of how likely it is skippers will feel safe entering the proposed development under different weather conditions. The Trust is particularly concerned about access to waters for low impact fisheries, which are an important part of the East Lothian coastline’s cultural heritage and economy. The Spatial Squeeze in Fisheries report found that fishermen will be banned from over half of Scottish waters by 2050 due to the introduction of Highly Protected Marine Areas and renewables development, potentially indicating that many skippers would not feel safe entering operational offshore windfarms.

The Trust highlights a lack of accuracy in the application. In Ch 12, the statement “*spatial management measures in the Firth of Forth Complex MPA are being consulted*” on is inaccurate. Additionally it is a misinterpretation of the statutory consultation process to state that an outcome of the consultation will be the implementation of spatial management measures. We cannot pre-empt the outcome of Scottish Government consultation. Therefore, this should not be considered as a valid reason for not considering mitigation or compensation.

In Appendix 18.1: Socioeconomics and Tourism Technical Impact Report, SSE-R project that the number of local direct, indirect and induced full-time equivalent job years<sup>7</sup> created by the proposed development in the baseline UK supply scenario for each level 1 category for option 1 and option 2 will be 12,330 and 12,150 respectively. The Trust recognises that this total includes jobs relating to all parts of the proposed development’s lifespan but would welcome more information on securing recruitment in the local area. We also believe SSE-R should be strongly encouraged to look at where fisheries displacement does occur, how those whose livelihoods are impacted could be supported to transition into jobs relating to the proposed development.

Additionally, the Trust questions the use of FTE job years instead of FTE jobs, as the use of FTE jobs would have allowed comparisons between sectors and projects. The use of FTE job years is uncommon as far as we are aware, making it very difficult to contextualise the figures provided. Assuming the project ran for twenty years, then the gross job estimates would be around 600 jobs over that period.

The employment estimates have not been adjusted for deadweight, displacement, or substitution, as would be expected if the standard Green Book<sup>1</sup> approach had been followed. The report does not, and on that basis we would expect the net estimate to be lower than that proposed here<sup>8</sup>.

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<sup>7</sup> The application states *FTE job year is the same as one full-time job for one year*

<sup>8</sup> HM Treasury (2022), *The Green Book: Central Government Guidance on Appraisal and Evaluation*

Chapter 12 states that “*guidance on community benefits in relation to offshore wind is currently being developed by Marine Scotland*”. The Trust recommends that as well as incorporating this guidance, SSE-R incorporates the Scottish Government’s Good Practice Principles for Community Benefits from Offshore Renewable Energy Developments in 2018. Although provision of community benefit is voluntary, the Trust would like to see these principles adhered to and notes that community benefit should be additional to compensation to specific sectors like fisheries.

Turning to electromagnetic field (EMF) impacts, given the historic importance of the fishing industry along the Berwickshire Coast and the difficulty in assessing the likely impacts of the transmission cables on commercially important species, the current Environmental Impact Assessment (EIA) considerations for these impacts are insufficient. There is currently a significant lack of knowledge of the impacts of EMF from AC and DC transmission cables which results in the need for a tailored, site specific, EIA.

We have concerns that scientific literature utilised to inform on the potential impacts of EMF on benthic species within Ch 8 – Benthic Subtidal and Intertidal Ecology are outdated and based on modelled predictions. The primary citations used to advise on the magnetic field strength and decay are from 2005 and 2009, with the ‘*recent study*’ cited (CSA, 2019) being primarily based on older modelled studies from 2011<sup>9</sup>.

The developer has stated that “*The Berwickshire and North Northumberland Coast SAC is located 4.12 km from the Proposed Development export cable corridor. On the basis that there is no spatial overlap there is no pathway for impact from EMF effects and therefore no further assessment is required for this impact.*” However many commercially fished and ecologically important species within the Berwickshire and North Northumberland Coast SAC are migratory, with some undertaking migrations upwards of 300km<sup>10</sup>. In addition to these migrations, many commercially important crustacean populations are transient in nature with populations moving between different regions on a large scale.

Given the limitations of our current understanding on the impacts of EMF on benthic invertebrates the Trust believes there may be need for more robust research and continued monitoring.

## **4.6 Compensation proposed in derogation case**

### **4.6.1 Sandeel fisheries**

The Trust argues this compensation measure is not additional; is unable to be fully delivered by SSE-R; and fails to fully assess the ecological effectiveness of closing SA4. The below comments (unless specified) relate to both options of closure of SA4 and ecosystems management of SA4 as much of the same text is present when discussing both scenarios.

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<sup>9</sup> Normandeau et al. (2011)

<sup>10</sup> Hunter, E., Eaton, D., Stewart, C., Lawler, A. and Smith, M.T., Edible crabs “Go West”: migrations and incubation cycle of *Cancer pagurus* revealed by electronic tags. *PLoS One*, 8(5), p.e63991. (2013)

Firstly, the proposed measure cannot be considered as compensation because it is not additional. The derogation case states *“at the time of writing, the Applicant is unaware of any other plans/ initiatives to expand the ‘sandeel box’ or impose any other restrictions/ closures in the remaining sandeel fishery SA4. Therefore, the Applicant’s plan would be considered new and additional in this context.”*

This statement is inaccurate. In 2021 RSPB released a report calling for the closure of sandeel fisheries in the Scottish and UK EEZs<sup>11</sup> and the Trust has recently publicly called for a closure to sandeel fisheries in the Scottish EEZ<sup>12</sup>. Additionally, in the Fisheries Management Strategy 2020 to 2030: delivery plan (published September 2022) the Scottish Government committed to consulting on the future of Sandeels management in Scottish waters and their official public position is *“not to support fishing for sandeels in our waters”*<sup>13</sup>. The closure of sandeel fisheries in Scottish waters, which includes SA4, has already been committed to by Scottish Government therefore we believe this compensation measure is not additional. Indeed, in proposing SA4 alone is closed, the proposed compensation actually offers *less* than Scottish Government’s commitment.

Moreover, the compensation measure cannot be considered additional because closure of sandeel fisheries is not required because of the impacts of the proposed development but because of other existing pressures on seabirds which the proposed development will add to.

The compensation measure should not be considered by Marine Scotland as delivery of it is contingent on the actions of third parties. Closure of SA4 is a decision for Scottish Ministers and may require negotiations at an EU fisheries level, for which UK Government assumes responsibility. This means closure of SA4 is not something SSE can deliver alone although they could be an important stakeholder in influencing policy.

The Trust is disappointed to see the lack of ambition in this proposed compensation measure, and subsequently questions the projected effectiveness. SSE-R states *“the closure of sandeel fishing in SA4 is expected to immediately benefit all SPA populations in proximity to the Proposed Development through facilitating an increase to seabird adult survival.”* For benefit to occur at the scale suggested a closure of all Scottish waters not just SA4. This is because there are some species such as fulmars and gannets with large foraging ranges who will leave SA4. Seabirds will also forage wider than SA4 during the pre-breeding and non-breeding seasons.

The Trust contests the factual accuracy of the statement *“ [there will be a] likely increase in immigration and positive spillover effects of reduced sandeel mortality into SA1r.* Sandeels tend to spend their lifetimes in the same habitat as they are very sensitive to habitat change. They are

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<sup>11</sup> <https://community.rspb.org.uk/ourwork/b/scotland/posts/shrinking-sandeels-shrink-the-fishery#:~:text=In%20recent%20years%2C%20sandeel%20abundance,and%20survival%20of%20sandeel%20larvae.>

<sup>12</sup> <https://www.nts.org.uk/stories/help-us-save-scotlands-seabirds>

<sup>13</sup> <https://www.parliament.scot/chamber-and-committees/questions-and-answers/question?ref=s6w-00600>

distinctly defined stocks that do not tend to migrate between habitats and therefore there is unlikely to little spill over effect.

Finally, the Trust questions the efficacy of SA4 closures and the accuracy with which the ecologically effectiveness of such a measure has been assessed. The derogation case also does not accurately characterise all the causes of sandeel depletion. The Trust agrees that one cause of the lack of sandeel abundance is pressures from fisheries but mounting scientific evidence shows that sea warming, and its effect of reducing food available to sandeels, is also one of the primary reasons for reduced sandeel abundance<sup>14</sup>.

The effects of natural predation, particularly by large fish, and mortality by the sandeel fishery have an effect on sandeel abundance which is additive to sea warming<sup>1516</sup>. Therefore, closure of SA4 alone is not guaranteed to result in predictable increase in sandeel abundance and it is misleading to claim *with certainty* the number of seabirds that will be added to the population following closure of the sandeel fishery.

The developer states that closing the fishery may result in more sandeels to be consumed by other commercially important fish species. The Trust argues that this interaction does not appear to have been considered in the prediction of numbers of seabirds that will be added to the population and highlights the danger of oversimplifying the web of ecological interactions which determine prey available to seabirds. Predation by other fish is the dominant source of predation mortality, far greater than that of other marine predators and so changes in populations of predatory fish, and other factors, are also important in determining the effect of SA4 sandeel fishery closure. This again highlights that it is misleading to claim *with certainty* the number of seabirds that will be added to the population following closure of the sandeel fishery.

Moreover, the uncertainty in the magnitude of reduction in fishing pressure expressed throughout the derogation case (e.g. *“specific area that is trawled by the [sandeel] fishery is unknown”* and *“the scale of reduction of fishing is somewhat uncertain”*) is not reflected in claims of large benefits (*“high (beneficial)”* and *“major (beneficial)”*) in terms of available prey to seabirds, marine mammals and valuable commercial fish, which are repeatedly made.

Finally, SSE-R state *“In the unlikely event that monitoring demonstrates insufficient returns, a suite of adaptive management measures will be implemented. This include (1) ‘built-in’ measures i.e. adaptations ... including exploring the potential to limit other fishing methods (such as scallop dredging)”*. The Trust does not agree this should be considered by Marine Scotland as a potential adaptive management measure since stopping scallop dredging is not something SSE-R has the power to do. This sits with Scottish Ministers and fisheries authorities.

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<sup>14</sup> <https://www.frontiersin.org/articles/10.3389/fmars.2019.00201/full>

<sup>15</sup> <http://www.ccpo.odu.edu/~klinck/Reprints/PDF/wanlessProgOcn2007.pdf>

<sup>16</sup> Carrol et al 2017

#### 4.6.2 Biosecurity on Handa

Rats were cleared from Handa in 1997 but returned by 2005. They were again cleared in 2007/8 but again returned in 2012. Experience also shows that the rats have a way to reach Handa, perhaps swimming from the nearby mainland (which is 300m away. Rats can swim up to 2 km). The history of Handa and proximity to the mainland highlight a high risk of re-invasion which is not accounted for in the derogation case.

The current kittiwake population is 7,498 birds. The numbers of birds anticipated to increase per year on Handa appears to be overestimated as Kittiwakes commonly nest on very steep cliffs where it is difficult for rats to access. Despite the fact rat eradication will likely have limited impact on breeding success of Kittiwakes, the report predicts 124 new adult kittiwakes and 251 new chicks to the population each year.

#### 4.6.3 Dunbar warden

The derogation case suggests that adding artificial nests and ledges to Dunbar castle has *“the potential to increase kittiwake breeding success and therefore population growth”*. This is counter to reasonable expectation. The kittiwake population at Dunbar is declining meaning there are currently available ledges for birds, and no requirement for the addition of artificial ledges.

The existing ledges are not being filled because the population is declining for other reasons – most likely factors away from the colony such as climate change or, more recently, interactions with new offshore windfarms in the Firth of Forth. Furthermore, clipping plastic from nests will be highly unlikely to have any population impact. Kittiwakes incorporate marine litter into their nests in the same way they incorporate any other material, it does not lead to weaker nests as suggested by SSE-R. While wardens are always a welcome addition to provide education and reduce disturbance to breeding birds, the Trust argues the assessment of *“major beneficial significance”* of introducing a warden is highly misleading.

#### 4.6.4 Overall impact from the three compensation measures

Table 26 (*“balance of overall annual impacts and benefits to the SPA network for both fisheries management and colony based measures combined”*) is dangerously misleading. We have described here large sources of uncertainty in the predicted efficacy of compensation measures and substantial grounds to suggest that the measures may not be effective.

Nevertheless Table 26 claims, without any confidence intervals or caveats, to predict large *“surpluses”* of four seabird species because of the proposed compensation measures. The derogation case states that the three compensation measure are *“substantial, and justification with the evidence has been*

*provided within the derogation case that provide sufficient information to allow the Scottish Ministers to conclude that the national site network will be maintained and enhanced". This wording and the information in Table 26 are highly misleading because they fail to acknowledge that there is a high degree of uncertainty in the efficacy of the proposed measures.*

The Trust supports Scotland's journey away from fossil fuels towards renewable energy and supports development in the right locations and of the right size. Given the failure of the proposed measures to compensate for the impacts of the development, the Trust recommends the proposed development explores other locations where more suitable, impactful and additional compensation can be proposed.

## **5 Alternative Sites**

Ch 4, Site Selection and Consideration of Alternatives states that two deep water sites were considered however DW1 was excluded because it overlapped with the MPA "*...as illustrated in Figure 4.7, it was not possible to avoid the MPA for DW1, as this deep water option overlaps with the MPA at the south-east part of the Proposed Development array area.... the Firth of Forth Banks Complex MPA is considered the most significant constraint at this stage of development*".

The overlap with the MPA was the most significant constraint on DW1 being considered as the location for the proposed development, however the current site overlaps with the MPA. From maps provided by SSE-R, we estimate 20-30% of the proposed development site overlaps with the MPA. The Trust would welcome an explanation as to why overlap with an MPA was considered a justification for excluding DW1 but not a reason to exclude the current site.

The Trust believes SSE-R should be directed to explore other more suitable sites where the impact on seabird mortality, landscape, fisheries and coastal communities and designated sites is less significant and severe, and where compensation that is effective and additional can be proposed, for example, deep water sites that are of less significance to seabird foraging.

## **6 Statement of Need**

The application includes a statement of need for the development. However, the statement consistently refers only to the singular goal of decarbonising when the reality is that the challenge as described by the United Nations at COP15 is that we are facing the twin threats of climate change and biodiversity loss. The statement of need has accurately described the urgency to decarbonise but has neglected the twin challenge of biodiversity loss. It has also repeatedly claimed that we cannot meet decarbonising goals without the proposed development without adequately referencing the high biodiversity costs predicted for this development.

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